

COMPLETE LISTING OF ALL CLAIMS IN THE APPLICATION

1. (previously presented) A process for the distillation of vinyl aromatic monomers in the presence of 4-tert-butylcatechol (TBC) and oxygen or an oxygen-containing gas wherein no aromatic nitro or amino compound is present in any effective amount to prevent polymerization.
2. (previously presented) A process as defined in claim 1, wherein the vinyl aromatic monomer used is styrene.
3. (previously presented) A process as defined in claim 1, wherein the 4-tert-butylcatechol is fed to a distillation assembly concurrently with the vinyl aromatic monomer, the concentration of 4-tert-butylcatechol in the bottom mixture of the distillation assembly being in the range of from 200 to 15,000 ppm based on the vinyl aromatic monomer.
4. (previously presented) A process as defined in claim 1, wherein the distillation is carried out under vacuum at temperatures ranging from 40° to 125°C.
5. (previously presented) A process as defined in claim 1, wherein the oxygen-containing gas is metered into the bottom mixture of a distillation assembly through a gas spray.
6. (previously presented) A process as defined in claim 1, wherein the oxygen-containing gas is metered in on the suction side of a circulating pump mounted upstream of a distillation assembly.
7. (previously presented) A process as defined in claim 1, wherein the oxygen is fed in

at a rate of from 0.01 to 0.5 wt%, based on the weight of vinyl aromatic monomer.

8. (previously presented) A process for the destabilization and purification of styrene containing 4-tert-butylcatechol, comprising the step of evaporating the styrene in the presence of oxygen or an oxygen-containing gas in the absence of other polymerization inhibitors.

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